

### ABSTRACT OF THE DISCLOSURE

A discrete multitone interleaver system, including an interleaver and deinterleaver, are provided for efficiently communicating data despite noise affecting a Discrete Multitone modulation (DMT) system. The discrete multitone interleaver includes a convolutional encoder capable of receiving a plurality of bits on tones and capable of outputting a convolutionally encoded plurality of bits and a synchronized dual skipping switch capable of passing the plurality of bits on tones to the convolutional encoder in a non-sequential order and capable of outputting the convolutionally encoded plurality of bits in the same non-sequential order. The discrete multitone deinterleaver includes a convolutional decoder capable of receiving a plurality of bits on tones and capable of outputting convolutionally decoded bits and a synchronized dual skipping switch capable of passing the bits to the convolutional decoder in a non-sequential order and capable of outputting the convolutionally decoded plurality of bits in the same non-sequential order.